



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/583,435	06/16/2006	Gervin Ruegenberg	067407-5043US	1283

67374 7590 05/23/2008
MORGAN, LEWIS & BOCKIUS, LLP
ONE MARKET SPEAR STREET TOWER
SAN FRANCISCO, CA 94105

EXAMINER

CYGAN, MICHAEL T

ART UNIT	PAPER NUMBER
----------	--------------

2855

MAIL DATE	DELIVERY MODE
-----------	---------------

05/23/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/583,435	Applicant(s) RUEGENBERG ET AL.	
	Examiner Michael Cygan	Art Unit 2855	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9-14 and 16-18 is/are rejected.
- 7) ☒ Claim(s) 8 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 June 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>4/08/08</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Drawings

New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because Figure 4 has a caption not in the English language. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-7, 9, 10-14, and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Weissgerber (US 6,627,075 B1) in view of Gosger (WO 03/066264 A). Weissgerber teaches the claimed invention, a method to supply a defined fluid flow to a liquid chromatograph [29], in which:

- a) the total flow is split into two branches (Figure 3, at node 33),
- b) the split ratio is determined by the resistances of fluidic resistors 66 and 67,

e) the working branch comprises a chromatography column 29 downstream from resistor 63,

f) the excess branch comprises an adjustable resistance [45,46] downstream from resistor 67,

g) where the resistance flow is controlled using the four resistances as a bridge, where the adjustable resistance is used to balance the flow through the bridge; see column 8 lines 8-29.

Weissgerber teaches the claimed invention except for the use of a cross-branch measuring cross-flow with a flow sensor, where the flow is near zero. Gosger teaches the use of a cross-branch measuring cross-flow with a flow sensor, where the flow is near zero, where the result of the flow sensor is used to adjust the balance flow. See Figure 1 showing crossbranch [7], flowmeter [18] in a bridge resistance flow stabilizer; see paragraph 0055 (of the US 2005/0092609 document supplied by applicant as substantially cumulative of the WO 03/066264 document, IDS 11/24/2006 page 3). It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the use of a cross-branch measuring cross-flow with a flow sensor, where the flow is near zero where the pre-balanced flow is set at an unbalanced state (paragraph 055 of Gosger) as taught by Gosger in the invention taught by Weissgerber to measure the relative flows through the bridge (in the place of Weissgerber's pressure sensors), since Gosger teaches that such measurement minimizes the effects of pressure and flow fluctuations (para 0045).

With respect to claim 2, while Gosger teaches a nonzero flow set point (paras 0055-0057), Gosger does not teach the flow being either positive or negative. As stated by the Supreme Court in *KSR Int'l Co. v. Teleflex, Inc.*, 127 S. Ct. 1727 (2007), "it will be necessary . . . to look to interrelated teachings of multiple patents . . . and the background knowledge possessed by a person having ordinary skill in the art, all in order to determine whether there was an apparent reason to combine the known elements in the fashion claimed by the patents at issue." *KSR Int'l*, 127 S. Ct. at 1740, 1742. As restated in *Astrazeneca AB v. Mylan Labs, Inc.*, 490 F. Supp.2d 381, 401 (SDNY 2007), the "person of ordinary skill in the art will 'pursue the known options' where there are a 'finite number of identified, predictable solutions' to a particular problem because a person of ordinary skill is 'a person of ordinary creativity, not an automaton'." (quoting *KSR Int'l*, 127 S. Ct. at 1742). The references above identify a finite number of flow directions; the flow may be either positive or negative through the branch. Therefore, one having ordinary skill in the art would have found it obvious to set a positive flow set point value.

With respect to claims 3, 4, and 12, the controller 75 of Weissgerber corrects the flow through each branch of the bridge to reach the flow corresponding to a desired flow set point (column 7, lines 14-24; column 8, lines 8-28) by a controller via a correction parameter [77].

With respect to claims 5 and 16, a lookup table is used to correct the sensor signal (column 9 lines 44-49).

With respect to claims 6 and 7, the pre-balanced flow is set at an unbalanced state differing from the set point state (paragraph 055 of Gosger).

With respect to claim 10, the fluidic resistances are designed to process solvents prior to chromatography, therefore it would have been obvious to one having ordinary skill in the art to minimize the pre-column separations, since chromatographic analysis relies upon accurate, predictable separation of substances in a sample, particularly since it has been held that discovering an optimum value of a result effective variable (fluidic solvent resistance) involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

With respect to claim 11, both resistances are exposed to the same environment and would therefore exhibit the same temperature.

With respect to claims 14 and 18, the lines leading to resistance element 45 form a non-adjustable resistance, that will form the resistance value when the resistance element is completely open (column 7, lines 14-23).

Allowable Subject Matter

Claims 8 and 15 (as renumbered) are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims, since the prior art neither discloses nor fairly teaches the steps recited therein in combination with the other limitations of the claims.

Response to Arguments

Applicant's arguments filed 8 August 2008 have been fully considered but they are not persuasive. In response to applicant's argument that Gosger is nonanalogous art, it has been held that a prior art reference must either be in the field of applicant's endeavor or, if not, then be reasonably pertinent to the particular problem with which the applicant was concerned, in order to be relied upon as a basis for rejection of the claimed invention. See *In re Oetiker*, 977 F.2d 1443, 24 USPQ2d 1443 (Fed. Cir. 1992). In this case, the field of applicant's endeavor is a method to supply a defined fluid flow. Gosger provides a method of supplying a defined fluid flow by altering the resistance of a flow channel. Therefore, the Gosger reference is in the same field of endeavor.

With respect to the set point, Weissgerber corrects the flow through each branch of the bridge to reach the flow corresponding to a desired flow set point (column 7, lines 14-24; column 8, lines 8-28) by a controller via a correction parameter [77].

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael Cygan whose telephone number is (571) 272-2175. The examiner can normally be reached on 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edward Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Michael Cygan/
Primary Examiner, Art Unit 2855

Application/Control Number:
10/583,435
Art Unit: 2855

Page 8